

Discussion

The applicant hereby adopts and repeats its submissions made in support of the unamended claims in the prior Response. In response to the examiner's office action of February 2, 2011, the applicant makes the following further remarks.

Principles of sections 102, 103

"All truths are easy to understand once they are discovered; the point is to discover them."

Galileo Galilei

The applicant has begun with this quotation because all of the examiner's responses are based on the premise that each of the claims 21 through 40 of the pending application are all obvious in view of the prior art cited by the examiner.

There is an immense amount of jurisprudence around what constitutes obviousness. The applicant will not refer to all of this source material but will make reference to some special clarifying thoughts on the subject. To commence, section 103 will now be quoted as follows:

35 U.S.C. 103 Conditions for patentability; non-obvious subject matter.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The undersigned attorney likes to explain the principles of patent law to inventors and others by referring to the "Golden Rule" of patent law. Simplifying the language of sections 102 and 103, the Golden Rule is that a patent may not attempt to take away from the public anything that was previously available to the public. "Available to the public" appears in the text of the Patent Cooperation Treaty and is included in the new legislation pending before Congress, corresponding to Senate Bill S. 23. This expression addresses everything known previously in the prior art. But logically, anything which is "obvious" in view of the prior art would also be "available to the public". So section 103 is really an extension on section 102.

These combined sections protect the public from the importune issuance of a patent which takes away from the public their freedom to do something that was previously available to be done. Seen in this context, "obvious" properly describes things that would be readily apparent to "a person having ordinary skill in the art to which said subject matter pertains" as being an available option without the necessity for such a person to exercise inventive initiative.

Taking an alternate policy approach analysis, section 103 is intended to bar issuance of claims which covers subject matter which ordinary non-inventive individuals would readily adopt in the normal course. The fact that something has not already been done by the time an applicant files for patent has got to carry some weight in arguing that what the applicant proposes is beyond being merely obvious.

Examiner's rejection based on obviousness

In the case of this particular invention, the examiner has rejected claims 21-25, 28, 30-33, 37-40 on the basis of 35 US 103, applying the applicant's own prior patent US 6, 244, 005 and US patent 5, 511, 761 to Schultz. In doing so, the examiner states that:

"... it would have been an obvious matter of design choice to one of ordinary skill in the art to modify the wall panel of Wallin, including a footing, to have the footing formed to by a footing form as disclosed by Schultz so that it is attached to and position beneath and extending laterally from the flange forms to provide a wall assembly that is easy to construct; whereby the footing form can be filled with binder material that serves as a footing along the base end of the panel, interconnected, covered, footing volume to extend between two adjacent wall panels (were Schultz discloses that the footing form attached to and positioned lateral to the wall portion and is open to the interior of the wall portion to allow the binder material to flow from one to the other creating a continuous wall/footing assembly".

If the above assertion by the examiner presumes that there is a wall portion in Schultz, then this understanding is incorrect. Schultz addresses both a wall and footing form for forming an entire wall together with its footing by casting concrete on site. Schultz does not include a precast component. According to the present invention no solid wall is cast on-site. The wall portion of the invention is precast, or preformed, off-site. The examiner surely recognizes this but the applicant has to make this distinction between prior Wallin and Schultz clear for the record.

Next, the above assertion by the examiner starts off with the premise that the person making the "design choice" has already perceived the concluding structure that they are going to create. But part of an inventive step is the perception that something can be created. The applicant submits that the combinations that the examiner proposes would not be readily recognized as available to ordinary non-inventive individuals, even though they may be skilled in the art.

It is not sufficient for the examiner to assert that if one were to take the present applicant's earlier patent with its precast footing and substitute for that precast footing by attaching a footing form similar (note that it is not identical) to that of Schultz, then this will produce the invention as claimed. The issue has to include whether even proceeding to make such a

combination would be obvious. The applicant says that this initial, essential, step would not be obvious.

But there are further barriers to making the combination that the examiner has proposed.

The modifications required to combine prior Wallin and Schultz include:

1. To convert the prior Wallin panel to the new system of present claim 21 requires removal of the precast footing from the prior Wallin wall design. This is a first modification to the prior Wallin configuration.
2. Schultz's footing form cannot be fitted against the precast wall panel of the prior Wallin wall panel without cutting away portions of the flange forms. This is a second modification to the prior Wallin panel.
3. If you did cut away portions of the flange forms and simply fitted Schultz's footing form at the bottom of the previous Wallin wall panel, Schultz's footing form would not fill with concrete. You would have to cut openings in Schultz's form. This is a modification to the Schultz footing form.
4. In the case of Schultz, the light-weight side wall pouring forms of Schultz are supported by Schultz's footing form from the top edge of Schultz's form. A Schultz footing form placed on one side of a preformed Wallin wall panel along its bottom edge would not support the Wallin preformed wall panel because of the weight. The Wallin wall panel would have to extend downwardly to the ground, to the same level as the bottom outer edge of the Schultz footing form so that both can rest on the ground at the same level. This is a third modification to the prior Wallin panel.
5. Unlike Schultz, the footing form for the prior Wallin panel is not removed but is retained to serve as reinforcement. (See the further discussion below for the difference between Schultz and Wallin on this point).

With all of these changes in mind we have to ask the questions:

1. Why would someone decide to remove the preformed footing from the prior Wallin wall design?
2. Why would someone decide to cut away bottom portions of the flange forms of the precast wall panel of the prior Wallin system?
3. Why would someone cut openings into the top of the Schultz form?
4. Why would someone extend the prior Wallin wall panel downwardly to the same level as the bottom outer edge of the Schultz footing form until, unlike the Schultz configuration, the wall panel can rest upon the ground?

5. Why would someone retain the footing form once the casting is complete?

It's not just a question of why each of these things would be done. It's the question why all of these things would be done, and done together. Why would someone have conceived to do this? Would they have known that it would work?

It isn't a matter of whether the new configuration is "easy to make". The issue is whether ordinary workmen would immediately see that the new configuration is available and would work.

Feeding Concrete into the footing form

The Schultz footing form is filled by a heavy volume of liquid concrete poured into the wall-forming volume which then spreads out sideways to fill-out the footing form. The concrete flows into the Schultz footing form down from the wall cavity core and **outwardly, all along its length**, fed by the concrete in the directly adjacent wall-forming volume.

In the applicant's invention the footing form is filled-out by liquid concrete poured into the flange forms. When this concrete reaches the bottom of the flange form it must **spread out laterally on either side of the flange form** for a considerable distance in order to fill the footing form volume. It is not altogether clear in advance that the concrete will flow outwardly in this manner. It is therefore not clear that this new configuration will work. This is a further argument for the configuration of claim 21 to be non-obvious, notwithstanding the allegations by the examiner that the former Wallin patent and Schultz can be combined.

35 USC103 obviousness as applied to Claim 21

To make this combination as alleged by the examiner an ordinary workman would, without inventive initiative, have to conceive that:

- a) the Schultz footing form may be filled with concrete through a flange form;
- b) the concrete in the Schultz footing form, when filled from a vertical source that is positioned above the footing form will fill-out horizontally and along the length of the wall;
- c) the precast wall panel in the prior Wallin design can be seated with its weight resting on the ground before filling the forms with binder, unlike Schultz where the wall forms are carried by the upper edge of the footing forms which must carry the weight of the forms above, and unlike the prior Wallin patent where the precast wall panel sits above the subsurface on a precast footing, and

- d) the footing form in the new combination should remain bonded to the poured footing to serve as reinforcement, allowing for a footing of reduced size and an overall reduced quantity of concrete.

Accordingly, since the action of the footing form in the present invention is distinct in character from the action of the footing form in the Schultz invention, why would an ordinary workman without inventive ingenuity conceive to make the combination as alleged by the examiner with all of the changes that have been identified?

There is a difference between the prior art and the wall panel concept of claim 21, and that difference makes a difference for all of the advantages and reasons set out above and in the disclosure of the pending application. There is no basis for the examiner to say that the advantages of the benefits based on such differences would be obvious to ordinary workers merely on an examination of the prior Wallin and Schultz references.

On the basis of all of the foregoing it is submitted that claim 21 should be considered allowable by the Examiner. Three further supporting observations will now be made.

Declaration made by the applicant, Arne Wallin

In the most recent previous response the applicant filed a declaration made by the applicant herein, Arne Wallin. The examiner has indicated that she is disregarding this declaration in so far as it attests to the nonobvious character of the combination addressed in this present application. The applicant objects that this declaration cannot be disregarded simply because it comes from the applicant inventor. It has to be given some consideration. However and additionally, from this declaration the following facts are apparent:

- a) Schultz does not fill his footing form through a flange form;
- b) the footing form in Schultz is not filled from a vertical source that is positioned above the footing form;
- c) the footing form in Schultz is filled outwardly from the core of the adjacent wall that is being cast at the same time, being filled transversely *across* the base of the wall, and
- d) the footing form in Schultz is not filled progressively proceeding longitudinally *along* the length of the footing form.

Accordingly, the action of the footing form in Schultz is distinct in character from the action of the footing form in the present invention.

As shown in the previously filed declaration by Arne Wallin, in the present invention:

- a) the footing form is filled through a flange form;

- b) the footing form in the present invention is filled from a vertical source that is positioned above the footing form;
- c) the footing form in the present invention is not filled laterally from the core of the adjacent wall form that is being cast at the same time, and
- d) the footing form in the present invention is filled progressively proceeding longitudinally along the length of the footing form.

This difference is emphasized in this near-final paragraph of the Wallin declaration which reads as follows:

"Subsequently I proceeded with building a foundation for a cottage home using the configuration of the present invention. In doing so, I was able to demonstrate that the concrete, if sufficiently fluid, would under hydraulic pressure flood-out the footing form sufficiently to ensure a continuous footing between flanges. This was particularly achievable by using flow-grade concrete and/or providing vibration within the concrete slurry while it was being poured into the flange forms. Such vibration made the concrete behave as if it were more liquid."

Support for these teachings appear in paragraph [0018] of the disclosure of the patent application. It would not be obvious to ordinary workmen that such procedures would be required.

Reinforcement effect of the footing form

A further major distinction between the present invention and the combination of the prior Wallin reference and Schultz is that the footing form in Schultz is removed once the wall portion is poured. In the prior Wallin patent there is no footing form; instead there is a precast footing with no provision for a footing form to remain in place, anchoring the wall panel to a footing. This is the opposite of the arrangement in the present invention as stipulated in claim 21 namely as follows:

b) a footing form

i) attached to and extending laterally away from the wall portion on the flange side of the wall portion so as to remain with the wall portion

The Examiner had previously observed that this limitation is met in Schultz. However, in Schultz it is specifically stated:

" The importance of open area 49 in footing forming member 9 lies in the fact that it is important that no portion of the wall forming apparatus extend within the concrete receiving cavity 45, other than the tying means 33, which is accessibly disposed above the lower peripheral frame section 13 of a wall forming member 7. This facilitates ease in

stripping the integral monolithic footing and wall forming units once the concrete has set and hardened."

The concept contemplated in Schultz is that the footing form in his construction is to be removed from the concrete wall and footing once formed. This is to be contrasted with the function of the footing form in the present invention. As stated in the disclosure for this present invention:

" [0017] When portions of the outer sheeting material forming the walls of the vertical flange forms extend into the binder in the footing form to serve as coupling means, the outer sheeting of such the forms then serves as reinforcement extending between the cast-in-place portions of concrete in the final wall system."

"[0024] The forms themselves serve as reinforcing for the binder they eventually contain. To improve coupling between these forms and the binder with which such forms are eventually to be filled, without precipitating fracturing of the sheeting material, portions of the walls of the forms may be depressed or deformed inwardly to provide dimples or tabs to be embedded within the binder when the binder is poured into the forms. This improves the composite effect of the forms in serving as a reinforcement to the concrete."

The Wallin footing form is: "attached ... so as to remain with the wall portion in the same orientation once the footing volume has been filled with binder material". The form is part of the final structure. It spans and connects the footing to the wall portion, providing valuable reinforcement. It either strengthens the footing and/or permits the footing to be less massive.

This is a characteristic which is not provided by the forms in Schultz. Nor is it a feature which is provided in the prior Wallin patent. It is a concept arising from the fact that the footing form is, as stipulated in claim 21, attached to ... the wall portion on the flange side of the wall portion so as to remain with the wall portion in such orientation once the footing volume has been filled with binder material. This is a configuration with an associated benefit that would not be obvious to ordinary workmen.

On this basis, it is submitted that claim 21 should not be rejected as obvious but be accepted as allowable by the Examiner.

Desjoyaux, US patent 5,111,628 and declaration of Sylvain Pellerin

In a prior office action, the examiner asserted obviousness on the basis of Desjoyaux, US patent 5,111,628. In a response dated June 1, 2010 the applicant filed two brochures describing swimming pools produced by Le Groupe Desjoyaux to the design of the Desjoyaux patent. These brochures were provided along with a DVD from Distribution Desjoyaux Inc., of Quebec depicting the installation process for Desjoyaux pools.

Recalling from all of these references, the pool walls prepared using the Groupe Desjoyaux design employed prefabricated panels to form the pool wall and parts to provide an upper trough and vertical tubes, which are called "chimneys". At the job site, concrete is poured into the upper trough and allowed to descend down the chimneys to flood out along the bottom of the pool wall, open to the air in the upward direction. The concrete that floods out at the bottom of the pool wall is not contained by any form attached to the panels. It is allowed to accumulate along the base of the pool wall on the outer side facing the earthen sidewall until a continuous band of concrete extends around the base of the pool wall. The top of the concrete along the base of the panels is exposed to the air and is not enclosed by any covering footing form that is attached to the pool walls. In this respect, the Groupe Desjoyaux design is similar to that of the prior Wallin reference applied by the examiner.

A distinction over this design with regard to the prior Wallin reference is that the precast wall panels of the prior Wallin reference are set on a precast footing which has a trough portion for receiving concrete descending through the flange forms from the upper trough. But in both cases when the concrete reaches the bottom, it floods out laterally uncontained and exposed to the air.

In a response dated May 31, 2011 the applicant filed the declaration of Sylvain Pellerin, the president of Distribution Desjoyaux Inc., of Quebec, with a translation which contained the following statement:

"In all years that I have been involved in this process, we have never considered or attempted to provide a form for containing the footing to the pool wall wherein the form is attached to and carried by the pool wall, nor have we considered or attempted to provide a form that will cover and contained the concrete along the base of the pool walls while it is being poured, or thereafter."

The applicant relies upon this evidence in further support of its assertion that the alleged combination of the inventor would not have been obvious.

Rejections of claims 22-25, 28, 30-33, 37-40 under 35 USC 103

The foregoing discussion has addressed principally claim 21. All of the remaining claims refer back to claim 21 and adopt the limitations therein. Claim 21 has been shown to have inventive character over the combination as recited by the Examiner. All such claims are therefore patentable on the basis that claim 21 is patentable.

All of these claims add additional integers which even further distinguish their scope of coverage from the combination cited by the Examiner. Accordingly, all of these claims should be allowable as well.

But the examiner has gone on to reject claims 22-25, 28, 30-33, 37-40 as also being obvious under 35 US 103 in view of both the prior Wallin patent and Schultz. As a summary all of

the dependent claims will now be listed in short form. Without prejudice to the right of the applicant to rely on the full text of each of the claims, such dependent claims address the following additional features above and beyond the combination of claim 21:

22. Plurality of flange forms in each panel amended to add a ledge protruding along the base end of the wall panel on the side opposite to the flange side.
23. Top panel trough communicating with the flange volume
24. Reinforcing couplings extending from the wall portion to support reinforcing bar in the flange or footing volumes, amended to add the function of couplings as lifting hooks
25. Outer edge of the footing form is resiliently located below the base of the wall portion to allow the outer edge to become aligned with variations in the supporting surface when the preformed wall panel is placed on such surface.
26. Referring to Claim 21, the outer terminal edge of the footing is bent back into the footing volume to be cast into the footing
27. Referring to Claim 25, the outer terminal edge of the footing is bent back into the footing volume to be cast into the footing
28. Flanges and footing form sheet material edges irregularly embedded into the wall panel to be interrupted from alignment in a straight line
29. A beam support post form with an upwardly extending open volume adjacent the wall panel for receiving binder material.
30. a plurality of panels assembled to form a building wall with footing forms aligned to provide continuous, interconnected, covered footing volumes amended to provide that the forms are connected to each other and remain as reinforcement after being filled
31. Referring to claim 30 a trough form mounted along the top end of the wall portion defining a trough volume and the wall panels define a closed perimeter building wall
32. Referring to claim 31, reinforcing couplings seated in and protruding from the wall portions into said footing volumes to position and support reinforcing rod, amended to characterize the couplings as wire positioned to serve as lifting hooks
33. Referring to claim 32 having vertical half-flange forms, the outer edge of at least one of said half-flange forms having at least portions of its surface extending to overlap and permit coupling to an adjacent half flange form
34. Referring to claim 30, a precast corner piece positioned abutting adjacent half-forms at a corner plus a joiner piece connecting the half forms to provide a vertical cavity that communicates with the footing volume
35. Referring to claim 34, a flanged positioning plate beneath the corner piece
- 36 referring to claim 30 a multi-tiered wall of panels having troughs and footings one above the other
- 37-40. Referring to earlier claims and stipulating for the use of concrete

The applicant will rely on the patentability of claim 21 to support the patentability of claims 22-24, 30-32, 37-40 as well the additional features added by these claims.

Particular assessment of claims 22, 24, 25, 28, 30-33, 37-40

The applicant will now particularly address the following of the above claims for further emphasis: 22, 24, 25, 28, 30-33

Claim 22 This claim has been amended to stipulate for the presence along the base of the wall panels of a protruding ledge, extending outwardly on the side opposite to the flange side. This feature is depicted in Figure 6 as element 18 and is referenced in paragraph [0086]. In the context of the other limitations of the claim, this feature has no corresponding structure in the prior art.

Claim 24 This claim has been amended to stipulate that the couplings are in the form of wire which, when not connected to reinforcing rod, are positioned to be bent up to serve as lifting loops. Support for this feature may be found in the specification in paragraph [0077] in respect of the reference numeral 34 referencing both loops and wire. This is a feature not referenced in the prior art.

Claim 25 Outer edge of the footing form is resiliently located below the base of the wall portion to allow the outer edge to become aligned with variations in the supporting surface when the preformed wall panel is placed on such surface.

The examiner's support for rejecting this claim appears to be the parenthetical statement on page 18: "(were Schultz discloses sheet metal, which is the same material applicant discloses in the specification, where sheet metal has a resiliency)". This ignores the limitation in claim 25 that the lower edge of the footing form is: "positioned beneath the base of the wall portion when the wall portion is suspended in a vertical plane". This feature cannot be true of Schultz because there is no wall portion in Schultz. Further, the footing form and Schultz has to carry the weight of the forms above. This is the opposite to the design of the present invention wherein the wall panel rests on the ground and the footing form does not carry any weight.

Accordingly, claim 25 should be allowable.

Claims 26, 27

The examiner would allow these claims if re-written to include all of the limitations of the prior claims on which they depend. The applicant considers this unnecessary as the prior claims should be allowed.

Claim 28 Flanges and footing form sheet material edges embedded into the wall panel are interrupted from alignment in a straight line.